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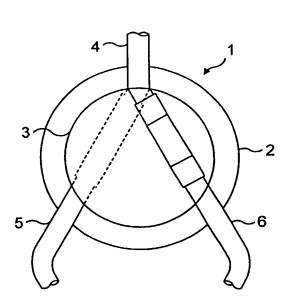
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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,

[Continued on next page]

(54) Title: METERING DEVICE



(57) Abstract: A device for accurately metering food. The device includes an outer part and an inner metering part having a dosing chamber and a piston block slideably mounted therein. The housing outer part has three passageways, and the dosing chamber is configured, dimensioned, and positioned to alternately connect two of the three passageways of the outer part. The inner metering part is configured, dimensioned and positioned for rotation within the outer part. The outer housing part and the inner metering part are mounted concentrically with the inner metering part and the inner metering part has only one degree of liberty in rotation around a central axis of rotation.



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of inventorship (Rule 4.17(iv)) for US only

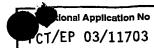
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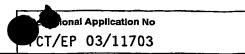




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A. CLASSIF IPC 7	FICATION OF SUBJECT MATTER G01F11/00		
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C. DOCUM	ENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the re	elevant passages	Relevant to claim No.
Х	US 3 400 739 A (JEAN-LUC BERRY E	T AL)	1-15
	10 September 1968 (1968-09-10) column 4 - column 5; figure 2	,	
		CT AI \	1–15
X	US 4 830 068 A (LANGENHAHN LUTZ 16 May 1989 (1989-05-16)	1-15	
ŀ	cited in the application		1 15
Y	figures 1,2		1-15
Y	US 5 456 298 A (TENNIS STEVE)		1-15
	10 October 1995 (1995-10-10) cited in the application		
	figures 3-5		
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° Special	categories of cited documents:	"T" later document published after the In	ternational filing date
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1	Fax: (+31-70) 340-2040, 1x, 31 651 epo III,	Fenzl, B	

INTERNATIONAL SEARCH REPORT

rmation on patent family members



Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 3400739	Α	10-09-1968	FR	88122 E 1486038 B1	15-04-1966 04-03-1971
			DE GB	1110327 A	18-04-1968
			NL	6512305 A	30-09-1966
US 4830068		16-05-1989	DE	3630077 A1	17-03-1988
00 100000		20 00 2000	FR	2603554 A1	11-03-1988
			GB	2196065 A ,B	20-04-1988
			JP	63067204 A	26-03-1988
US 5456298	Α	10-10-1995	NONE		